

AMENDMENTS TO THE CLAIMS

Claims 1-30 (Canceled).

31. (Currently Amended) ~~An improved~~ A reworked
metallic braking rotor or drum having a braking surface
adapted to engage a brake pad or brake shoe, respectively,
in dry sliding contact and frictional loading characterized
in an initial manufacturing process by presence of residual
tensile stresses and tooling mark indentations in said
braking surface comprising:

an ultrasonically reworked braking rotor or drum
presenting a smoothed plastically deformed braking surface
introducing increased braking surface contact area.

32. (Currently Amended) The braking rotor or drum of
Claim 31 further comprising a compressed sub-surface layer
on the braking surface establishing increased wear
resistance properties.

33. (Currently Amended) The braking rotor or drum of
Claim 32 further comprising a depth of said compressed sub-
surface layer exceeding the limits of braking wear depth.

34. (Currently Amended) The braking rotor or drum of
Claim 31 wherein said reworked rotor surface further
comprises a machined surface established by ultrasonic
impact machining with a set of individual randomly
ultrasonically driven indenter elements.

35. (Currently Amended) The braking rotor or drum of Claim 31 wherein the smoothed plastically deformed braking surface has a roughness not exceeding 200 micro-inches.

36. (Canceled).

37. (Currently Amended) An ultrasonically reworked metallic braking rotor or drum having a plastically deformed, smoothed and compressed braking surface.

38. (Canceled).

39. (Currently Amended) The reworked braking rotor or drum of Claim 37 having a surface roughness of less than 200 micro-inches.

40. (Currently Amended) The reworked braking rotor or drum of Claim 37 presenting a uniform stress profile under the braking surface to a depth of 12 mm, thereby ensuring uniform deformation eliminating stress concentration at the surface and reducing possibility of crack development.

41. (Currently Amended) The reworked braking ~~surface~~ rotor or drum of Claim 37 wherein the ~~presenting a cast iron~~ braking surface is cast iron with a strength exceeding the yield point of the cast iron.

42. (Currently Amended) The reworked braking ~~surface~~ rotor or drum of Claim 37 ~~presenting~~ wherein the braking surface has a surface of higher contact area for abutment with the brake lining.

43. (Currently Amended) The reworked braking ~~surface~~
rotor or drum of Claim 37 wherein the braking surface has
~~having~~ a smoother surface finish with better contact surface
area with the applied brake lining during operation
resulting in less heat build up during brake application
[[,]] providing more efficient braking and a safer
application of the brake.

44. (Canceled).

45. (Canceled).